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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,282	08/10/2001	David Eric Dutterer	OWT 0118 PUS	5315

22045 7590 05/09/2003

BROOKS & KUSHMAN  
1000 TOWN CENTER 22ND FL  
SOUTHFIELD, MI 48075

EXAMINER

NGUYEN, DUNG V

ART UNIT PAPER NUMBER

3723

DATE MAILED: 05/09/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/927,282

Applicant(s)

DUTTERER ET AL.

Examiner

Dung V Nguyen

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-32 is/are allowed.
- 6) ☒ Claim(s) 1-14, 19 and 21 is/are rejected.
- 7) ☒ Claim(s) 15-18, 20, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 11-14, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fushiya et al (USPN 5,018,314) in view of McCracken (USPN 6,168,507). Fushiya et al disclose an orbital sander comprising an elongated housing 12 having first end, a central region and second end, a motor 10 disposed within the housing central region and having a motor shaft 22 extending toward the second end and rotatable about an axis, a drive member 26 eccentrically driven by the motor shaft 22 and having integrally formed fan 30, a sanding platen 40 oriented adjacent to the second end of the housing and orbitally driven by the drive member 26, the platen 40 having a planar surface 34a perpendicular to the axis adapted to receive sand paper, a fan 30 distributed around the axis in a non-uniform manner so to balance the drive member 26 and platen 40 about the axis without the use of a balance weight, wherein the fan blades comprises top blades and bottom blades with top blades located at the top of the drive member 26, the bottom blades located at the bottom of the drive member 26 wherein the fan 30 comprises a plurality of fan blades 32, wherein the motor speed at the maximum continuous operation rated load is in excess of 12,000 rpm, a power supply oriented within the housing, wherein the sanding platen 40 is freely

mounted to the housing 12 by the bearing and is capable of rotating about the extension axis in order to operated in a random orbital manner, wherein the sanding platen 40 is mounted to the housing 12 by a retainer which allows relative orbital movement of the sanding platen 40 relative to the housing 12, but prohibits free rotation of the sanding platen 40 about an axis, wherein the housing 12 defines an annular dust collection in a chamber circumaxially extending about the eccentric drive and terminating in a dust outlet 33, the sanding platen 40 is provided with a plurality of dust collecting ports 48 extending therethrough and the eccentric drive is provided with a fan 30 so the rotation of the motor 10 causes the fan 30 to rotate drawing air and dust through the ports 48 in the sanding platen 40 and discharging the air and dust through the dust outlet 33 (note Fig. 1-7, col. 2, line 38 to col. 6, line 25). Fushiya et al do not disclose the motor is a high speed permanent magnet DC motor. McCracken discloses a high speed permanent magnet DC motor (note Fig. 10 and 11, col. 10, line 65 to col. 11, line 57). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the orbital sander of Fushiya et al with a high speed permanent magnet DC motor as disclosed by McCracken in order to prevent accidental disconnection of electrical cord that can interrupt electrical power to the sander.

3. Claims 2-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fushiya et al (USPN 5,018,314) in view of McCracken (USPN 6,168,507). Fushiya et al, as modified by McCracken, lacks motor speed drops less than 10%, 15% or 25% when the motor load is increased from the no load condition to the maximum continuous operation rated load, or the motor has a speed in excess of 8,000, 10,000 or 12,000

Art Unit: 3723

rpm when the motor is loaded at a torque of 20, 15 or 10 in. oz. respectively, or the motor speed drops less than 10% when the motor load is increased from 50% of the maximum continuous operation rated load to 100% of the maximum continuous operation rated load. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a motor that has a motor speed drops less than 10%, 15% or 25% when the motor load is increased from the no load condition to the maximum continuous operation rated load, or the motor has a speed in excess of 8,000, 10,000 or 12,000 rpm when the motor is loaded at a torque of 20, 15 or 10 in. oz. respectively, or the motor speed drops less than 10% when the motor load is increased from 50% of the maximum continuous operation rated load to 100% of the maximum continuous operation rated load, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

#### ***Allowable Subject Matter***

4. Claims 24-32 are allowed.
5. Claims 15-18, 20, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

6. Applicant's arguments, see Remarks, page 7, filed 11 March 2003, with respect to the rejection(s) of claim(s) 1-14, 19 and 21 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Art Unit: 3723

However, upon further consideration, a new ground(s) of rejection is made in view of McCracken.

7. Applicant's arguments, see Remarks, page 6, filed 11 March 2003, with respect to claims 22-24, 27, 30 and 31 have been fully considered and are persuasive. The rejection of claims has been withdrawn.

***Conclusion***

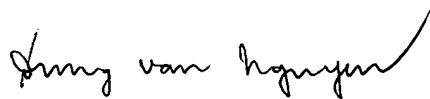
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

DVN

May 5, 2003



Dung Van Nguyen  
Patent Examiner